FCA5300 Chemical Cleaning Agent

FCA5300 is a solid composite acid chemical cleaning agent produced for industrial recirculating cooling water systems. Formulated with organic acid base and multi-component corrosion inhibitors, it efficiently removes calcium carbonate, calcium sulfate, iron oxide, and composite scale/rust deposits under ambient to moderate temperatures (up to 60°C). Its powder form ensures precise dosing, safe storage, and transport. With significantly lower corrosion aggressiveness than conventional mineral acids, it effectively mitigates hydrogen embrittlement and pitting risks. Designed exclusively for shutdown cleaning operations, it is widely applied across power, petrochemical, metallurgical, and HVAC industries for deep cleaning of heat exchangers, boilers, reactors, and pipelines—restoring thermal efficiency and extending equipment service life.

Product Features

- Low-Corrosion Safety Profile: Advanced inhibitor system delivers corrosion rates far below mineral acids; effectively suppresses hydrogen embrittlement and pitting on carbon steel and stainless steel.
- Rapid Multi-Soil Removal: Quickly dissolves rust and hard scale at ambient temperature; heating to 40–60°C further enhances efficiency across diverse deposit types.
- Solid-Form Advantages: White to light yellow crystalline powder, ≥95.0% active content; excellent flowability, precise dosing, leak-proof storage, and transport safety.
- Material Compatibility Clarified: Suitable for carbon steel, low-alloy steel, stainless steel; aluminum, zinc, and other reactive metals require pre-cleaning trial validation.
- Operational Flexibility: Recommended dosage 300–800 mg/L (based on system water volume); adjustable per fouling severity; residues easily rinsed and neutralized.
- Eco-Conscious Handling: Low-residue profile; spent solution complies with industrial discharge standards after neutralization.

Physicochemical Properties

The following represent typical properties of FCA5300 for reference only and are not guaranteed supply specifications. Refer to official technical documentation for certified data.

Item	Index
Appearance	White to light yellow crystalline powder
Active Matter Content (%)	≥95.0
pH (1% aqueous solution)	≤1.0

*For specialized applications or customized solutions, please contact FFM Inc. directly.

Instructions for Use

- Application Scope: Shutdown-phase chemical cleaning of recirculating cooling systems to remove carbonate, sulfate, iron oxide, and mixed deposits. Suitable for heat exchangers, boilers, reactors, and piping made of carbon steel, low-alloy steel, stainless steel. Aluminum, zinc, and reactive metals require small-scale trial prior to full application.
- Procedure:
  - Perform only after system shutdown and isolation; dose at 300–800 mg/L based on system water volume;
  - Circulate at ambient temperature; for heavy fouling, raise temperature to 40–60°C to enhance efficacy;
  - After cleaning, thoroughly flush system; neutralization and prefilming recommended prior to restart.

Packing and Storage

25 kg paper bags with inner plastic liners. Store sealed in a cool, dry, well-ventilated area. Strictly moisture-proof.

Shelf Life

12 months.

Precautions

Strongly acidic solid. Wear dust mask, acid-resistant gloves, goggles, and protective clothing. Never store or mix with alkaline substances. In case of skin/eye contact, rinse immediately with ample water for ≥15 minutes and seek medical attention. Cleaning must be conducted under system shutdown and isolation conditions.